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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/663,614 | 09/16/2003 | Mehrdad Mahanpour | H0930 | 3537 |

7590 01/14/2005
Kelly K. Kordzik
Winstead Sechrest & Minick P.C.
1201 Main Street
P.O. Box 50784
Dallas, TX 75201

EXAMINER

LEE, HSIEN MING

ART UNIT PAPER NUMBER

2823

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/663,614

Applicant(s)

MAHANPOUR ET AL.

Examiner

Hsien-ming Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22 is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/4/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

HSIEN-MING LEE
PRIMARY EXAMINER

lie
1/2/05

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 091603.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION***Specification***

1. The disclosure is objected to because of the following informalities:

On page 7, at lines 8, 9, 11 and 15, “regions 104A-B”, “regions 105A-B”, “contacts 106A-C” should be – regions 104A-~~104B~~ --, -- regions 105A-~~105B~~-- and – contacts 106A-~~106C~~ --, respectively.

On page 8, at line 11, “Figures 3A-D” should be – Figures 3A-3D --.

Allowable Subject Matter

2. Claims 1-22 are allowed.
3. The following is a statement of reasons for the indication of allowable subject matter:

In re claims 1-9 and 22, Ramappa to US 6,812,050 teaches a related method for making a silicon on insulator (SOI) device 106/108 (Fig.3) suitable for performing passive voltage contrast, comprising: directing a beam of electrons 100 on the SOI device 106/108 to detect a secondary emission 102 from the SOI device 106/108 for evaluating gate oxide defects.

In contrast, Ramappa neither teaches nor suggests *grinding* a first portion of a substrate of the SOI device with a dimpling tool; *etching* a second portion of the substrate of the SOI with *TMAH* following the grinding; *applying a conductive coating* to the etched portions of the substrate and a box insulator of the SOI device; and applying the conductive coating to a portion of a body of the SOI device.

In re claims 10-19, Mansell et al. to US 6,108,121, teach a silicon-on-insulator (SOI) device 32/48 (Fig.1), comprising: a substrate 32/48, wherein a second portion of

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the substrate 32/48 is etched using TMAH to form a membrane 34 (col. 5, lines 52-55); and a third portion 48 of the substrate 32/48 is etched using HF acid (col. 5, lines 29-30).

In contrast, Mansell et al. neither teach nor suggest that a first portion of the substrate is *ground* using a *dimpling tool*; a *box insulator* overlying the substrate, wherein a portion of the box insulator is etched using the HF acid; a *polysilicon gate* separated from a body by a gate oxide; wherein a *beam of electrons* is directed at an area of the gate oxide to determine if there is a breakdown in the gate oxide.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hsien-ming Lee whose telephone number is 571-272-1863. The examiner can normally be reached on Tuesday-Thursday (8:00 ~ 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 571-272-1855. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Hsien-ming Lee
Primary Examiner
Art Unit 2823

Jan 12, 2005

HSIEN-MING LEE
PRIMARY EXAMINER

Lee
1/12/2005